program gi[redacted]n unbiased and reprodu[redacted]e means for evaluating [redacted] experiments.

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A 130 Synergistic Effects of Human Interferons (HuIFNs) with Either Amantadine (AMA) or Rimantadine (RIM). BRUNO J. LUSCRI*, U.S. Army Med. Res. Inst. Infect. Dis., Frederick, MD 21701

Evaluation of the sequential antiviral effects of HuIFNs with either AMA or RIM administered prior to virus infection were performed using toga- and arenavirus as indicator viruses. Readily demonstrable synergy in reducing plaque numbers of Sindbis, Venezuelan equine encephalitis (VEE), Mayaro, Rift Valley fever, Oropouche, Chikungunya, and lymphocytic choriomeningitis viruses was obtained when using five or more dilutions of HuIFN-β and AMA ranging from 20-40 µg/ml in MRC-5 cells, and against the viruses of yellow fever (YF), West Nile, Langat, and Japanese B encephalitis with AMA at 40-70 µg/ml in LLC-MK_2 cells. Addition of RIM to cells after HuIFN-α also resulted in synergy with reduction in viral PFU in MRC-5 cells against VEE virus (RIM at 4-20 µg/ml) and in LLC-MK_2 cells against YF virus (RIM at 40-100 µg/ml). Using a low titered HuIFN-γ synergy with RIM was obtained in Vero cells against Eastern equine encephalitis virus with 10-20 µg/ml of RIM, and in LLC-MK_2 cells against YF virus with 36 µg/ml RIM. PFU reduction after combined treatment was greater than additive reduction by individual treatment. These findings suggest that HuIFNs and synthetic antivirals are synergistic in their antiviral effects, a phenomenon which must be evaluated in future development of antiviral therapy.

A 131 **Additive Effect of Acyclovir and Vira-Amp Against Herpes Simplex Virus Type 2 (HSV2) Infection in Adult Mice.** M. R. KARIM*, J. COLEMAN, M. HOVLAND and M. I. MARKS, Northern State College, Aberdeen, SD and Univ. of OK Health Sci. Center, Oklahoma City, Oklahoma.

The chemotherapeutic efficiency of Acyclovir and Vira-AMP was evaluated in 3 and 5 week old female Sasco white mice against intravaginal inoculation with $7.5x10^3$ and 10^5 pfu of HSV 2 respectively to simulate the difference between sexually active human models. Forty-eight hours post inoculation and daily for the next four days, the mice were administered intraperitoneally with 0.2 ml each of acyclovir (80 mg/dg/day), Vira-AMP (100 mg/kg/day) and specific HSV2 antiserum (SAS) with plaque reduction titer of 1:128 and different combinations of the three. A two fold increased protection (80%) was observed in 5 week old mice receiving acyclovir and Vira-AMP compared to 3 week old mice (40%). Combinations of the three therapeutic